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Dear Mr. Beighle:

This letter answers the questions in your letter of November 18, 1994, about applying the Department's hazardous liquid pipeline safety regulations (49 CFR Part 195) to transfer piping at petrochemical plants. We were unable to respond sooner because of the need for agency-wide coordination on matters involving this new program area.

Whether Part 195 applies to particular transfer piping depends primarily on three exemptions from the regulations:

- Low-stress pipelines or pipeline segments are exempt, unless they transport a highly volatile liquid (HVL) or are located in a non-rural area, navigable waterway, or offshore (§195.1(b)(3)).
- Refining and manufacturing facilities (e.g., petrochemical plant facilities) are exempt, including in-plant piping systems and storage associated with those facilities (§195.1(b)(6)).
- Facilities on the grounds of materials transportation terminals are exempt if the facilities exclusively transfer hazardous liquid between non-pipeline modes of transportation (e.g., barge and railroad) or between a non-pipeline mode and a pipeline mode, not including any device and associated piping that are necessary to control pressure in the pipeline under §195.406(b) (§195.1(b)(7)(ii)).

None of the other exemptions from Part 195 is relevant to your inquiry (except for the gathering exemption mentioned in answer to question 1m).

The in-plant and terminal piping exemptions under §§195.1(b)(6) and (b)(7) are subject to the following definition and interpretations:

- The term "in-plant piping system" is defined in §195.2 as "piping that is located on the grounds of a plant and used to transfer hazardous liquid or carbon dioxide between plant facilities or between plant facilities and a pipeline or other mode of transportation, not including any device and associated piping that are necessary to control pressure in the pipeline under §195.406(b)."
- If there is no pressure control device on plant grounds that is required by §195.406(b) for safe operation of a jurisdictional pipeline serving the plant, in-plant piping extends to the plant boundary (57 FR 56305 and 59 FR 33389).
- If there is such a device on plant grounds, Part 195 applies to the device and to plant piping that connects the device to the jurisdictional pipeline (57 FR 56305 and 59 FR 33389).
- If the grounds of a plant are separated by a single public thoroughfare, transfer piping that crosses the thoroughfare from one part of the plant to the other is on plant grounds for purposes of the in-plant piping definition (59 FR 33389).
- Single public thoroughfares are roadways but not railroads (59 FR 33389).
- Because the in-plant piping exemption (§195.1(b)(6)) is comparable to the terminal facilities exemption (§195.1(b)(7)(ii)), the above interpretations of in-plant piping also apply to determining the limits of the terminal facilities exemption.

Question 1a Do the above in-plant, intra-facility, delivery, and inter-facility transfer piping definitions correctly define the four types of petrochemical facility transfer piping systems (excluding gathering transfer piping)?

Answer The type of transfer piping is not a factor in deciding whether particular low-stress piping is subject to Part 195.

Question 1b Do attached Figures 1, 2, 3, and 4 correctly delineate OPS jurisdictional boundaries for the four types of low-stress transfer piping systems?

Answer Figure 1 depicts a plant served by pipeline, rail, truck, and vessel transportation, with low-stress transfer piping on plant grounds. Except for the intrastate pipeline, which appears to cross the plant grounds, all piping would come under the in-plant piping exemption if there is no pressure control device on the piping to control pressure in the pipeline under §195.406(b). If such a device exists, the device and piping between the device and the intrastate pipeline would come under Part 195.

Figure 2 depicts a plant in which storage facilities are separated from process facilities by a single public thoroughfare and other non-plant property in a populated area. A low-stress transfer line connects the process and storage facilities. The line segment between the process and storage grounds does not qualify as in-plant piping because it crosses more than a single public thoroughfare. Thus, this off-grounds segment is subject to Part 195. The segment of transfer line inside the process grounds is also subject to Part 195, because it connects the jurisdictional off-grounds segment to a necessary pressure control device. If there is no necessary pressure control device on the transfer line segment inside the storage grounds, that segment would meet the in-plant piping definition because it transfers hazardous liquid between the jurisdictional off-grounds segment and plant facilities (the storage tanks).

Storage associated with refining and manufacturing facilities is exempt from Part 195 under §195.1(b)(6). So none of the storage tanks would come under Part 195, unless the tank provides surge relief for a jurisdictional pipeline or pipeline segment. When storage tanks provide this pipeline operational function in addition to their plant storage function, they are not exempt under §195.1(b)(6). Similarly, such tanks are not exempt as terminal facilities under §195.1(b)(7).

Figure 3 depicts a plant served by pipeline, truck, rail, and vessel transportation off plant grounds in a rural area. These transportation modes are connected to the plant facilities by a low-stress transfer piping system that begins in a navigable waterway or offshore and crosses an inland navigable waterway. Because the system is in a rural area, the low-stress pipeline exemption would apply, except for any segment of the system that transfers HVL and the segments that cross offshore or navigable waterway areas. If HVL is transferred, the segment of the system that transfers HVL off plant grounds would not be in-plant piping and, thus, would be subject to Part 195. Also, Part 195 would apply to the transfer line segment on plant grounds that connects the necessary pressure control device to the jurisdictional off-grounds HVL segment.

Figure 4 depicts two plants, A and B, in a populated area connected by a low-stress transfer line that crosses a railroad, a public thoroughfare, and other non-plant property. The transfer line segment between the two plants crosses non-plant property in addition to a public thoroughfare, and, thus, is not in-plant piping. The transfer line segment inside Plant A is not in-plant piping because it connects the jurisdictional segment between the plants to a necessary pressure control device. The segment inside Plant B connects the jurisdictional segment to another necessary pressure control device, and, thus, is also subject to Part 195.

Question 1c Is high stress (>20% SMYS) transfer piping crossing navigable waterways or third party property in populated areas subject to 49 CFR Part 195?

Answer The transfer piping does not qualify for the low-stress pipeline exemption or the in-plant piping exemption. It would be subject to Part 195, unless otherwise exempt under §195.1(b).

Question 1d If one high stress transfer piping segment is subject to 49 CFR Part 195, is the entire transfer piping system covered from each line's pressure control device to the adjacent facility's property line (in the absence of another pressure control device)?

Answer Application of Part 195 to one segment of a transfer system does not necessarily cause Part 195 to apply to other parts of the system. The application of Part 195 to other parts of the system depends on application of the exemptions under §§195.1(b)(3), (b)(6), and (b)(7), as explained above.

Question 1e Is transfer piping which crosses a railroad spur, levee, third party easement (i.e., pipeline), or third party property (i.e., pump station fee property) which is entirely within a plant facility's fenced property boundary considered in-plant piping or intra-facility piping?

Answer The transfer piping would be in-plant piping as long as it is located and functions as provided by the definition of in-plant piping system. Part 195 does not use the term "intra-facility piping." Within a fenced boundary, indicating the extent of plant grounds, in-plant piping can include crossings of railroad spurs, levees, pipeline easements, and even separately owned pipeline pump stations, because the crossings are on land that is generally associated with plant functions, with access subject to plant control.

Question 1f Is intra-facility transfer piping which crosses a navigable waterway or crosses third party property in a populated area, other than a single public thoroughfare, subject to 49 CFR Part 195?

Answer Transfer piping between adjacent grounds of the same plant in a populated area, separated by property other than a single public thoroughfare, is subject to Part 195 because neither the low-stress nor in-plant piping exemption applies.

Question 1g Is intra-facility transfer piping which crosses third party property in a rural area or crosses a single public thoroughfare in a populated area excepted from 49 CFR Part 195?

Answer Transfer piping between the grounds of a plant that are separated by property other than a single public thoroughfare is not in-plant piping. Such piping would be covered by Part 195, unless the low-stress exemption applies. If the plant grounds are separated only by a single public thoroughfare, the transfer piping would be exempt as in-plant piping, even if the piping transports HVL. Whether the area is rural or populated is only a factor in determining if the low-stress exemption applies to the piping.

Question 1h Is delivery or inter-facility transfer piping which crosses a navigable waterway or crosses third party property in a populated area, including a single public thoroughfare, subject to 49 CFR Part 195?

Answer Part 195 would cover the piping because the low-stress pipeline exemption does not apply to piping that crosses navigable waterways or populated areas. The in-plant piping exemption is

inapplicable in this situation because it only applies to piping inside a plant or between parts of the same plant separated by a single public thoroughfare.

Question 1i Is delivery or inter-facility transfer piping which crosses third party property in a rural area excepted from 49 CFR Part 195?

Answer If the piping is a low-stress pipeline, the crossing of rural property off-plant grounds is exempt under the low-stress pipeline exemption, unless the pipeline transports HVL. If not a low-stress pipeline, the rural crossing would come under Part 195, even if the hazardous liquid transported is not highly volatile.

Question 1j Is a roadway located on an Army Corps of Engineer's levee considered a single public thoroughfare?

Answer If the roadway is a single public thoroughfare, it would not lose this characterization because of the structure on which the roadway lies. So the thoroughfare interpretation may apply to a roadway atop a levee.

Question 1k If a transfer line is jointly owned and operated, which segments crossing the adjacent plant owner's property are subject to 49 CFR Part 195?

Answer Joint ownership is not a factor in deciding whether a transfer line comes under Part 195. However, if the adjacent plant grounds are contiguous, we consider each segment on plant grounds to be in-plant piping that is exempt from Part 195, except for any segment that connects a necessary pressure control device to an off-grounds pipeline.

Question 11 If part or all of the "plant grounds" are leased from a third party or state/local agency, are the plant's piping facilities located on these grounds considered in-plant piping up to the leased property line (in the absence of a pressure control device)?

Answer The leasing of real property to conduct plant processes is a factor in determining the extent of plant grounds. Thus, transfer piping located on leased real property may qualify for the in-plant piping exemption. If a necessary pressure control device is not part of the piping on plant grounds, the boundary of the grounds defines the limit of in-plant piping.

Question 1m Are low-stress gathering line segments crossing navigable waterways in rural areas subject to 49 CFR Part 195?

Answer Rural petroleum gathering lines are exempt from Part 195 under §195.1(b)(4), regardless of operating stress level or crossings of navigable waterways.

Question 1n If only 10% of a transfer line is subject to 49 CFR Part 195, what are the minimum maintenance, operations, and emergency response requirements for the remaining 90% of in-plant piping up to the plant's pressure control device?

Answer Assuming the jurisdictional segment lies immediately off plant grounds, the line segment between the necessary pressure control device and the off-grounds segment is also subject to Part 195.

The minimum maintenance, operations, and emergency response requirements for piping subject to Part 195 are in Subpart F of Part 195.

Question 1o If a marine transfer line is maintained and operated in compliance with 33 CFR (USCG) and 29 CFR 1910.119 (OSHA), can the dock piping be excepted from 49 CFR Part 195 by filing a request for waiver?

Answer Absent a necessary pressure control device on the dock, the dock piping would be excepted from Part 195 by the terminal exemption (§195.1(b)(7)(ii)). If not exempt, any operator may petition for waiver of any Part 195 requirement. However, waivers are granted only when a requirement is found inappropriate or unnecessary for safety in particular circumstances. Overlapping jurisdiction would not by itself be sufficient reason for a waiver.

Question 1p Are thermal relief devices, which provide limited overpressure protection to aboveground piping, considered pressure control devices under §195.406(b) and demarcate the in-plant jurisdiction boundary?

Answer Under §195.406(b), operators must have adequate controls and protective equipment to control pressure within the allowable limit. Although a thermal relief device may be necessary under §195.406(b) to control pressure in some aboveground piping, additional equipment or controls may be needed, considering the foreseeable causes of pressure variations. Therefore, the thermal relief device may or may not mark the end of Part 195 jurisdiction over piping inside the plant.

Question 1q Is a low-stress transfer line segment, with over two years of consistent service, which is determined to be subject to 49 CFR Part 195 after 7/12/96, then required to comply with 195.5 - Conversion to Service?

Answer The conversion regulation in §195.5 applies to pipelines being converted to hazardous liquid or carbon dioxide service from some other type of service (e.g., natural gas). Section 195.5 does not apply to pipelines already in hazardous liquid service when Part 195 becomes applicable to the lines.

Question 2a Are the following line segments [in Figure 5] excepted from 49 CFR Part 195 during inter-facility transfers from Plant A to Plant B:

- Segment between Plant A pressure control device and Plant A property line (considered in-plant piping)
- Segment between Plant A and Plant B property lines (considered a single public thoroughfare crossing)
- Segment between Plant B property line and Plant B storage tanks (considered in-plant piping due to absence of a Plant B pressure control device located downstream of the property line)
- Plant A pressure control device (considered a device operated as part of an excepted transfer line)

Answer Figure 5 depicts storage facilities of two plants, A and B, separated by a single public thoroughfare and other property. The separate storage facilities are connected by a low-stress transfer piping system that also connects between the plants to an intrastate pipeline that delivers to, and receives from, both plants. We assume all storage is associated with plant facilities that are exempt under §195.1(b)(6), and that ownership and operation of the transfer line are independent of the intrastate pipeline. Our answers follow in the same order as the questions:

- The line segment inside Plant A would be subject to Part 195 if the segment between the plants is subject to Part 195 and the pressure control device inside Plant A is required by §195.406(b) for safe operation of the between-the-plants segment.
- The between-the-plants segment is not covered by the thoroughfare interpretation, because the thoroughfare does not divide a solitary plant. If the between-the-plants segment is in a rural area, the segment is covered by the low-stress pipeline exemption, unless it transports HVL. If the area is populated (non-rural), the segment is subject to Part 195.
- The segment inside Plant B is covered by the in-plant piping exemption if, as the drawing indicates, there is no necessary pressure control device on the Plant B segment.
- The Plant A pressure control device is subject to Part 195 if it is required by §195.406(b) for operation of any jurisdictional segment of the transfer line or of the intrastate pipeline.

Question 2b If the transfer line also ties into an intrastate pipeline (trunkline) on/off plant grounds, is the segment of transfer line from Plant A pressure control device (tank pump) to the third party pipeline connection considered a low-stress branch line of the intrastate pipeline system, with the intrastate pipeline operator responsible for branch line compliance and the plant only responsible for pressure control device compliance with 49 CFR Part 195?

Answer Connection with the intrastate pipeline would not by itself make any part of the transfer line a branch of the intrastate pipeline and shift responsibility for compliance to the intrastate pipeline operator. In general, compliance with Part 195 is the responsibility of the entity that owns or operates a pipeline that comes under Part 195. However, if the intrastate pipeline operator relies on a plant pressure control device or storage tank to control pressure in the intrastate pipeline, that operator would also have to assure that the device or tank and associated piping comply with Part 195. When a pipeline operator and a plant have overlapping compliance responsibility, we hold the pipeline operator primarily responsible.

Question 2c If both plants A and B jointly own/operate the segment of transfer line from the intrastate pipeline connection to Plant B, which pipeline operator (intrastate, Plant A, or Plant B) is responsible for compliance with 49 CFR Part 195 requirements for the jurisdictional segment(s)?

Answer Although each joint owner is ultimately responsible for compliance, we would hold the owner that operates the transfer line primarily responsible. If A and B jointly operate the Plant B segment, then either A or B, or both, would be held responsible for compliance. We would hold the operator of the intrastate pipeline primarily responsible only if that operator were to rely on a plant pressure control device or storage tank for necessary pressure control in the intrastate pipeline and the Plant B segment effects that control.

Question 3a Since all in-plant piping and transfer facilities [Figure 6] are located on or across leased property (third party), which line segments are subject to 49 CFR Part 195?

Answer Figure 6 depicts Plant A inside a leased, fenced area, which is connected by a low-stress transfer line to a leased dock located on a navigable waterway or offshore. Between Plant A and the dock, the transfer line crosses property leased by Plant B, a fenced public thoroughfare built on a levee, and waters leading to the dock.

Regarding the leases, the existence of a lease authorizing plant or terminal operations is a factor in deciding the extent of plant or terminal grounds under the in-plant piping and terminal piping exceptions. Another factor is the presence of a fence or other demarcation indicating property used for plant or terminal operations. Applying these factors, it appears that the Plant A fenced area and the leased dock

represent plant and terminal grounds. Although Plant B leased property may also qualify as plant grounds, the transfer line in question merely crosses Plant B property with no apparent involvement in Plant B processes. So the Plant B crossing does not qualify for the in-plant piping exemption.

As to which segments are subject to Part 195, if the transfer line transports HVL, the low-stress exemption would not apply. However, in the absence of a necessary pressure control device, the terminal exemption would exclude the dock segment. The in-plant exemption would not exclude the segment in Plant A because of the pressure control device. If a hazardous liquid other than HVL is transported, the low-stress exemption would not exclude any segment in a non-rural, navigable waterway, or offshore area. The in-plant and terminal piping exemptions would then apply as stated for HVL transfers.

Question 3b When pumping from the dock to the plant, is only the aboveground segment of marine transfer line from the pressure control device (dock pump) to the navigable waterway high tide line considered delivery piping subject to 49 CFR Part 195?

Answer The direction of flow would not change the Part 195 coverage explained in answer to Question 3a, unless the dock segment has a pressure control device required by §195.406(b) Such a device would be something other than the pump itself, such as a pump control device or pressure relief valve.

Question 3c Considering the definitions of in-plant piping and delivery lines, can any marine transfer system's dock facilities be excepted from 49 CFR Part 195 under any circumstances?

Answer Yes, if the dock facilities are covered by the in-plant or terminal piping exemptions, as discussed above. Otherwise, low-stress pipeline segments that cross navigable waterways or offshore are not exempt from Part 195.

Question 3d When pumping from Plant A to the dock, is the segment of marine transfer line from the pressure control device (tank pump) to the property line considered in-plant piping and not subject to 49 CFR Part 195?

Answer Yes, unless the continuing line segment immediately off plant grounds is subject to Part 195 and the device is required to control pressure in that segment. Also, the device must be something other than the pump itself.

Question 3e Will the existing Memorandum of Understanding (MOU) between RSPA and USCG remain in effect granting USCG primacy for enforcing marine delivery line operator compliance with OPA 1990 regulations (33 CFR Part 154 in place of 49 CFR Part 194), given the new 49 CFR Part 195 overlap for these lines?

Answer RSPA and USCG do not have an MOU concerning regulations under OPA 1990. However, the USCG's authority under OPA 90 does not preclude application of Part 195 to marine transfer lines.

Question 4a If low-stress transfer line segments subject to 49 CFR Part 195 which are modified or constructed before 8/11/94 are excepted from Subpart C (design requirements) and Subpart E (hydrostatic testing requirements), but not Subpart F (operation and maintenance requirements), then is the pressure limit criteria (5) above [§195.406(a)(5)] only used to determine the segment's MOP?

Answer To determine the MOP of a low-stress pipeline constructed before August 11, 1994, a pressure must be calculated under each of the criteria in §195.406(a) that applies to the pipeline. MOP is the lowest of these pressures. The criteria of §195.406(a)(5) do not apply to low-stress pipelines constructed before August 11, 1994, unless the pipeline transports HVL and is not pressure tested under §195.302 (see §195.302(b)(1)(iv)).

Question 4b If 4a applies, can the MOP be established by pressure limit criteria (5) above for a low-stress marine transfer line segment which has experienced a documented 4 hour continuous hydrostatic pressure test (under 33 CFR) or an operating pressure exceeding pressure limit criteria (1), (2), (3), or (4) above?

Answer Section 195.406(a)(5) applies to determining the MOP of a low-stress pipeline constructed before August 11, 1994, only if the pipeline transports HVL and is not pressure tested under §195.302. Under §195.406(a)(5), any properly documented test or operating pressure held for at least 4 continuous hours is sufficient for compliance. However, a pressure calculated under §195.406(a)(5) would not determine MOP unless that pressure is the lowest pressure calculated under §195.406(a).

Question 4c To properly determine the MOP for any jurisdictional line covered under §195.302(b)(1) or §195.302(b)(3), must the above five pressure limits be determined with the lowest pressure establishing the line segment's MOP?

Answer For low-stress pipelines constructed before August 11, 1994, the lowest pressure among the applicable criteria in §195.406(a) determines MOP. But all criteria do not apply to all pipelines. For example, apart from converted pipelines, §195.406(a)(1) applies only to pipelines for which internal design pressure must be calculated under §195.106 (i.e., pipelines constructed, replaced, relocated, or otherwise changed after the applicable date in §195.401(c), or August 10, 1994, for low-stress pipelines). Also, the criteria in §§194[sic].406(a)(3) and (a)(4) do not apply to pipelines that are not subject to pressure testing under Subpart E of Part 195. And, as indicated above, §195.406(a)(5) has limited application to existing low-stress pipelines. So, for low-stress non-HVL pipelines constructed before August 11, 1994, only component design pressure under §195.406(a)(2) applies to determining MOP. If this design pressure is unknown, then the operator would have to establish a maximum pressure for safe operation of the pipeline within the procedures for normal operation under §195.402(a).

Question 4d If 4a applies, can the % SMYS at MOP of an existing undocumented transfer line segment subject to 49 CFR Part 195 be determined by using a minimum yield strength of 24,000 psi and wall thickness measurements, since each section's internal design pressure (and therefore pipe specifications) will not be required to be determined under §195.406(a)?

Answer If MOP cannot be determined under §195.406(a) for a low-stress pipeline constructed before August 11, 1994, the requirements of §195.106 (referenced in §195.406(a)) provide a guide to determining a maximum pressure for safe operation under §195.402(a). Section 195.106 permits 24,000 psi as yield strength in the design pressure formula if the pipe SMYS is unknown and the material is not tensile tested.

Question 4e Can a yield strength of 24,000 psi be used to determine the internal design pressure for low-stress pipe segments (undocumented and not tensile tested) with a yield strength at MOP not exceeding 24,000 psi?

Answer See answer to question 4d.

Question 4f Can any low-stress transfer piping less than or equal to 12-3/4", with unknown design factors (per §195.106), use a default pipe design pressure of 200 psig to determine it's [sic] MOP under §195.406 if not previously tested to yield?

Answer The 200 psig pressure under §195.406(a)(1) applies only to pipelines converted under §195.5. However, the 200 psig pressure may be used as a guide to determining a maximum pressure for safe operation of pipelines less than or equal to 12-3/4" whose MOP cannot be determined under §195.406.

Question 4g Other than §195.5 (conversion to service), what 49 CFR Part 195 requirements stipulate that piping covered under §§195.302(b)(1) and (b)(3) must have an internal design pressure determined per §195.106?

Answer The internal design pressure requirements of §195.106 apply to pipelines constructed after the applicable dates in §195.401(c). The only pipelines covered by §§195.302(b)(1) and (b)(3) to which §195.106 applies are interstate pipelines, other than low-stress pipelines, constructed between March 31, 1970, and January 8, 1971.

Sincerely,

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for Pipeline Safety